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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/556,308	04/24/2000	Hiroaki Kubo	018656-124	7095

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EXAMINER

JERABEK, KELLY L

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 12/18/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/556,308

Examiner

Kelly L. Jerabek

Applicant(s)

KUBO, HIROAKI

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11 is/are rejected.
- 7) ☒ Claim(s) 9, 10 and 12-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Page 9, line 21 "specifier 56b" should be "specifier 56".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 5-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi US 5,400,112 in view of Yahav US 6,445,884.

Re claim 1, Takagi discloses a photometric apparatus for a camera (fig. 19). The disclosed photometric apparatus includes an optical system through which light from a photographic subject passes (fig. 13: LE), and a light emission system for illuminating the photographic subject (fig. 19: 16, 29). In addition the photometric apparatus includes a plurality of light measuring elements (fig. 11A: 18a-18e). These light measuring elements sense light that is reflected by the subject and passes through the

Art Unit: 2612

photographic system (col. 7, lines 2-32). The photometric apparatus also includes a controller that controls the light emission system based on the light received by the light measuring elements (col. 10, lines 43-58; fig. 19: 26, 29). However, Takagi discloses that light passing through the optical system is received photographic film and not by an image sensor.

Yahav discloses a camera with through-the-lens lighting (fig. 1A). The camera includes a photosensitive surface (fig. 1A: 22). Yahav states that the photosensitive surface (fig. 1A: 22) may comprise photographic film or a CCD (col. 10, lines 56-60). Using a CCD as a photosensitive surface instead of photographic film is advantageous because it allows images to be captured electronically. For this reason, it would have been obvious to include an image sensor such as a CCD as taught in Yahav in the photometric apparatus disclosed by Takagi. Doing so would provide a means for controlling the flash emission of a digital camera.

Re claim 2, the photometric apparatus disclosed by Takagi includes a weighting value calculation means (fig. 19: 26) and a flash controller (fig. 19: 29). The weighting value calculation means (26) sets an integration amount for each light measuring element (col. 9, lines 60-67). Next, photometric regions at which the reflection rate distribution rate is very high or very low are extracted (col. 10, lines 1-23). Finally, the main flashing by the flash apparatus (fig. 19: 16) is carried out based on the results of the weighting light adjustment circuit (fig. 19: 28). See also (col. 10, lines 24-46).

Re claim 5, see claim 2. The voltage (E_n) corresponding to the weighting values are input into the weighting light adjustment circuit (fig. 19: 28) and cause the flashing apparatus (fig. 19: 16) to flash (col. 10, lines 43-46). The weighting value is the same as an average of all of the selected elements.

Re claim 6, the light measuring elements (fig. 2: 2) disclosed by Takagi are located in a space between the optical system (fig. 2: LE) and the photographic film (fig. 2: FI). See also (col. 2, lines 8-16). However, Takagi discloses that light passing through the optical system is received by photographic film and not an an image sensor.

Yahav discloses a camera with through-the-lens lighting (fig. 1A). The camera includes a photosensitive surface (fig. 1A: 22). Yahav states that the photosensitive surface (fig. 1A: 22) may comprise photographic film or a CCD (col. 10, lines 56-60). Using a CCD as a photosensitive surface instead of photographic film is advantageous because it allows images to be captured electronically. For this reason, it would have been obvious to include an image sensor such as a CCD as taught in Yahav in the photometric apparatus disclosed by Takagi. Doing so would provide a means for controlling the flash emission of a digital camera.

Re claim 7, see claim 6. The light measuring elements disclosed by Takagi sense light that is reflected at the film surface (fig. 2: FI). See also (col. 2, lines 8-16).

Re claim 8, Takagi discloses a photometric apparatus for a camera (fig. 19). The disclosed photometric apparatus includes an optical system through which light from a photographic subject passes (fig. 13: LE), and a light emission system for illuminating the photographic subject (fig. 19: 16, 29). In addition the photometric apparatus includes a plurality of light measuring elements (fig. 11A: 18a-18e). These light measuring elements sense light that is reflected by the subject and passes through the photographic system (col. 7, lines 2-32). Furthermore, the light measuring elements (fig. 2: 2) disclosed by Takagi are located in a space between the optical system (fig. 2: LE) and the photographic film (fig. 2: FI). See also (col. 2, lines 8-16). The photometric apparatus also includes a controller that controls the light emission system based on the light received by the light measuring elements (col. 10, lines 43-58; fig. 19: 26, 29). However, Takagi discloses that light passing through the optical system is received photographic film and not by an image sensor.

Yahav discloses a camera with through-the-lens lighting (fig. 1A). The camera includes a photosensitive surface (fig. 1A: 22). Yahav states that the photosensitive surface (fig. 1A: 22) may comprise photographic film or a CCD (col. 10, lines 56-60). Using a CCD as a photosensitive surface instead of photographic film is advantageous because it allows images to be captured electronically. For this reason, it would have been obvious to include an image sensor such as a CCD as taught in Yahav in the

Art Unit: 2612

photometric apparatus disclosed by Takagi. Doing so would provide a means for controlling the flash emission of a digital camera.

Claims 3, and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi in view of Yahav and further in view of Ogawa US 5,678,079.

Re claim 3, Takagi in view of Yahav includes all of the limitations of claim 2. However, Takagi in view of Yahav does not state that the controller determines an average value for the light measuring elements to set a standard value, and selects the light measuring elements that are less than the standard value.

Ogawa discloses a photometric device with a controller (fig. 3). The controller includes a standard value determining section (fig. 3: 44) which calculates a reference photometric value by performing a predetermined specified weighting addition of each photometric value (col. 3, lines 60-64). Setting a standard value of the light measuring elements is advantageous because it allows the controller to select values that are in a specified range. For this reason, it would have been obvious to include an standard value determining section as taught in Ogawa in the photometric apparatus disclosed by Takagi in view of Yahav. Doing so would provide a means for discarding extraneous light measuring element output values before controlling the flash unit of a camera.

Re claim 4, see claim 3. The standard value is calculated by performing a specified weighting addition (col. 3, lines 60-64).

Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi in view of Yahav and further in view of Kazumi et al. US 5,621,494.

Re claim 11, Takagi in view of Yahav includes all of the limitations of claim 8. However, Takagi in view of Yahav does not state that a diffusion plate is disposed on the photoreceptive surface of the light-measuring element.

Kazumi discloses a camera having a light-source determining function (fig. 1). The camera includes a light-measuring sensor (fig. 1: S1) that detects a light source, and a white diffusing plate (fig. 1: 13). See also (col. 5, lines 37-40). Placing a diffusion plate on the photoreceptive surface of a light-measuring element is advantageous because it balances light intensity. For this reason, it would have been obvious to include diffusion plate as taught in Kazumi in the photometric apparatus disclosed by Takagi in view of Yahav. Doing so would provide a means for balancing the light intensity of light entering the light-measuring element.

Allowable Subject Matter

Claims 9,10, and 12-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the following technical features as recited in the highlighted claims:

- a. "...wherein said light measuring element has a photoreceptor surface which is disposed approximately parallel to said optical axis" as recited in claim 9
- b.

"...wherein said image sensor has an image sensing surface which is located outside of the photoreception range of said light measuring element" as recited in claim 10.

- c. "...further including a condensing element for directing flare light within said space toward said light measuring element" as recited in claim 12.

- d. "...wherein said light measuring element is located on one side of said optical path, and said condensing element comprises a concave mirror located on the opposite side of said optical path" as recited in claim 13.

e. "...wherein said condensing element comprises a mirror which circumscribes said optical axis" as recited in claim 14.

f. "...wherein said optical system includes a low-pass filter through which light passes before it is received by said image sensor, and said condensing element is disposed between said low-pass filter and said image sensor" as recited in claim 15.

In order to expedite the prosecution of this application it is recommended that the above claims be written in independent form.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kudo et al. (US 5,517,243) discloses an image sensing apparatus with control for charge storage time. The information regarding electronic flash control is pertinent material.

Numata (US 6,654,062) discloses an electronic camera. The information regarding electronic flash control is pertinent material.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kelly Jerabek whose telephone number is (703) 305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary examiner, Wendy Garber can be reached at (703)-305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

The fax number for submitting all Official communications is (703) 872-9306.

The fax number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (703) 746-3059.

KLJ

VU LE
PRIMARY EXAMINER